

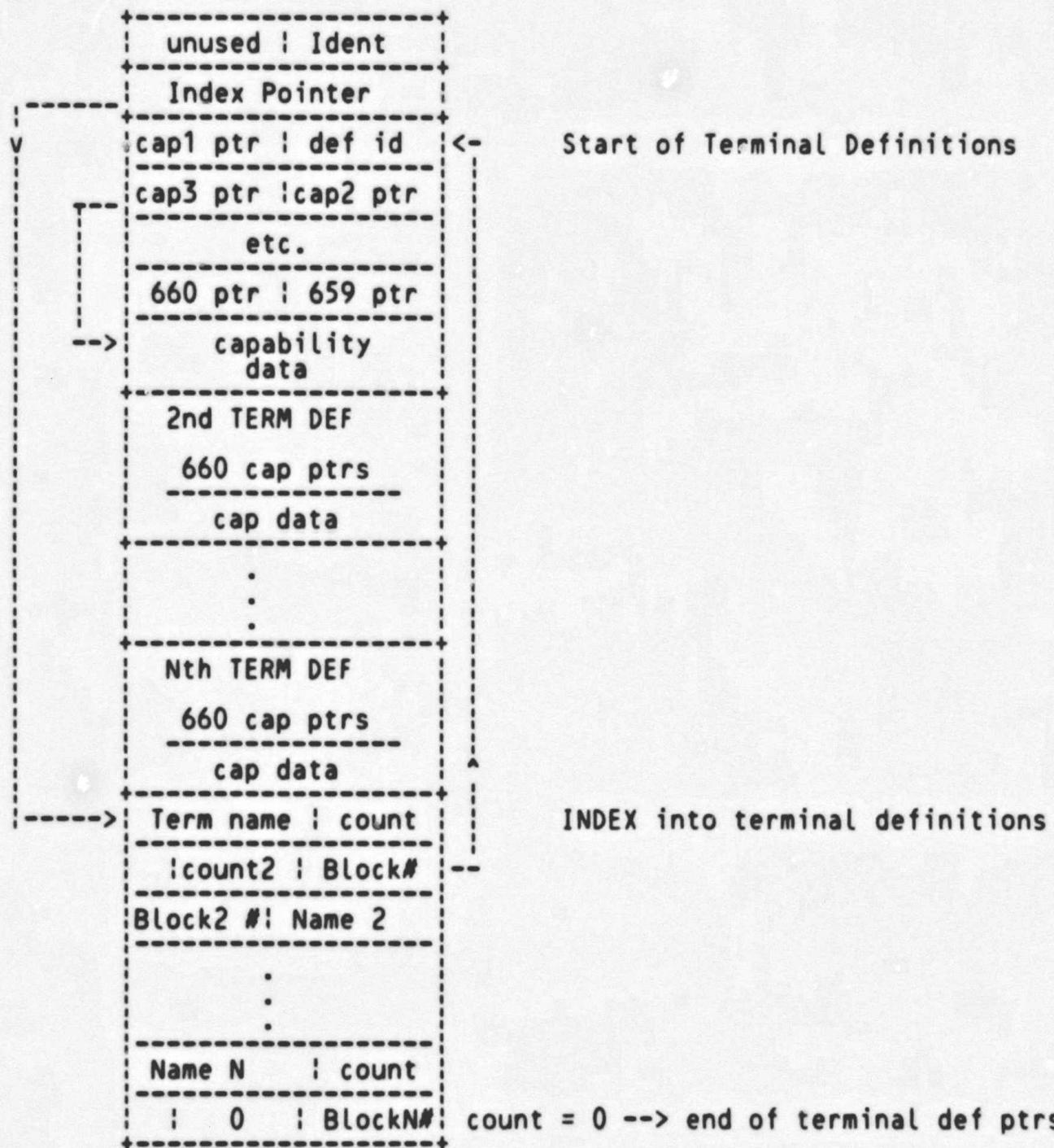
SSSSSSSS	MM	MM	GGGGGGGG	TTTTTTTT	PPPPPPP	AAAAAA	LL	IIIIII	BBBBBBBB	
SSSSSSSS	MM	MM	GGGGGGGG	TTTTTTTT	PPPPPPP	AAAAAA	LL	IIIIII	BBBBBBBB	
SS	MMMM	MMMM	GG	TT	PP	AA	AA	LL	BB	BB
SS	MMMM	MMMM	GG	TT	PP	AA	AA	LL	BB	BB
SS	MM	MM	GG	TT	PP	AA	AA	LL	BB	BB
SS	MM	MM	GG	TT	PP	AA	AA	LL	BB	BB
SSSSSS	MM	MM	GG	TT	PPPPPPP	AA	AA	LL	BBBBBBBB	BB
SSSSSS	MM	MM	GG	TT	PPPPPPP	AA	AA	LL	BBBBBBBB	BB
SS	MM	MM	GG	GGGGGG	TT	PP	AAAAAAA	LL	BB	BB
SS	MM	MM	GG	GGGGGG	TT	PP	AAAAAAA	LL	BB	BB
SS	MM	MM	GG	GG	TT	PP	AA	AA	BB	BB
SS	MM	MM	GG	GG	TT	PP	AA	AA	BB	BB
SSSSSSSS	MM	MM	GGGGGG	TT	PP	AA	AA	LLLLLLLL	BBBBBBBB	...
SSSSSSSS	MM	MM	GGGGGG	TT	PP	AA	AA	LLLLLLLL	BBBBBBBB	...
LL	IIIIII	SSSSSSSS	SSSSSSSS							
LL	IIIIII	SS	SS							
LL	II	SS	SS							
LL	II	SS	SS							
LL	II	SS	SS							
LL	II	SS	SS							
LL	II	SS	SS							
LL	II	SS	SS							
LL	II	SS	SS							
LLLLLLLL	IIIIII	SSSSSSSS	SSSSSSSS							
LLLLLLLL	IIIIII	SSSSSSSS	SSSSSSSS							

```
0001 0 %TITLE 'SMGTPALIB - SMGS TPARSE require files'
0002 0 Run-Time Library Screen Management Bliss Definition Library
0003 0 Module: SMGTPALIB.REQ Edit: PLL1001
0004 0
0005 0 ****
0006 0 *
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0023 0 * SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
0024 0 *
0025 0 *
0026 0 ****
0027 0
0028 0
0029 0 ++
0030 0 FACILITY: Screen Management
0031 0
0032 0 ABSTRACT:
0033 0
0034 0 This file contains require files used in the creation of TERMTABLE.EXE.
0035 0
0036 0 MODIFIED BY:
0037 0
0038 0 1-001 - Original. PLL 30-JAN-1984
0039 0 !--
0040 0
0041 0 LIBRARY 'RTLSTARLE'; ! Starlet definitions
0042 0 REQUIRE 'RTLIN:SMGTABDEF'; ! Terminal Table Definitions
0043 0
```

R0044 0 | Terminal Table Data Structure Definitions for RTL SMGS facility
R0045 0 | File: SMGTABDEF.REQ Edit: PLL1001
R0046 0 |
R0047 0 |
R0048 0 |*****
R0049 0 |*
R0050 0 |* COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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R0060 0 |*
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R0067 0 |*
R0068 0 |*
R0069 0 |******
R0070 0 |*
R0071 0 |*
R0072 0 |*
R0073 0 |** FACILITY: Screen Management
R0074 0 |*
R0075 0 |* ABSTRACT:
R0076 0 |*
R0077 0 |* This module defines the internal structure of the binary
R0078 0 |* TERMTABLE.EXE.
R0079 0 |*
R0080 0 |*
R0081 0 |*
R0082 0 |* MODIFIED BY:
R0083 0 |*
R0084 0 |* 1-001 - Original. PLL 2-Nov-1983
R0085 0 |*--
R0086 0 |*
R0087 0 |*
R0088 0 |* The internal structure of TERMTABLE.EXE is divided into several sections.
R0089 0 |*
R0090 0 |* Each terminal definition consists of 660 capability pointers and
R0091 0 |* a data area. If a terminal does not have a particular capability defined,
R0092 0 |* the pointer for that capability will be zero. Otherwise, the capability
R0093 0 |* pointer is an offset into the data area.
R0094 0 |*
R0095 0 |* Each capability data consists of a count and the data. The data may be
R0096 0 |* a binary number or an ascii string. A negative count indicates that
R0097 0 |* this is a dynamic string which requires processing (substitution, conversion,
R0098 0 |* or arithmetic).
R0099 0 |*
R0100 0 |* TERMTABLE.EXE also contains an index so that individual terminal definitions

can be located. The index will consist of a count, the ascii name for the terminal, and the block number where the terminal definition begins. The index will actually be located at the end of TERMTABLE.EXE. This is because the number of terminal definitions is unpredictable, and we don't want to impose an arbitrary size constraint that would restrict the number of terminals defined.

TERMTABLE.EXE will begin with an ident number, to allow for future changes. These future changes would probably allow more terminal capabilities (greater than 660).



```

R0158 0 !
R0159 0
R0160 0
R0161 0 !+ Offsets used to access a terminal table.
R0162 0 !-
R0163 0
R0164 0
R0165 0 MACRO
R0166 0   TTB_W_IDENT      = 0, 0, 16, 0%, | ident field (to allow for
R0167 0           | future changes)
R0168 0   TTB_W_unused     = 2, 0, 16, 0%, | not used
R0169 0   TTB_L_INDEX_OFFSET = 4, 0, 32, 0%; | offset from here to terminal
R0170 0           | index
R0171 0
R0172 0
R0173 0 !+ Define constants needed to build terminal table
R0174 0 !-
R0175 0
R0176 0 LITERAL
R0177 0   SMG$K_HEADER_SIZE      = 512,           | 1 block for header info
R0178 0   SMG$K_TERM_INDEX_SIZE  = 5000,          | arbitrary size for index
R0179 0   SMG$K_CAP_PTRS_SIZE    = 1536,          | 3 blocks to hold ptrs
R0180 0   SMG$K_CAP_DATA_SIZE   = 5120,          | 10 blocks to hold data
R0181 0   SMG$K_TERM_DEF_SIZE   = 6656,          | ptrs + data (3+10 blocks)
R0182 0   SMG$K_TERM_DEF_ID     = 137,           | random number to identify
R0183 0           | a valid terminal def
R0184 0   SMG$K_TERM_DEF_ID_OFFSET = 0,           | location of id - 1st
R0185 0           | word in ptr vector
R0186 0   SMG$K_MIN_REQUEST_CODE = 1,             | lowest capability number
R0187 0   SMG$K_MAX_REQUEST_CODE = 660;          | highest capability number
R0188 0
R0189 0
R0190 0 !+ The following are used when parsing arithmetic expressions.
R0191 0   Information about expressions is stored via these encodings.
R0192 0 !-
R0193 0 LITERAL
R0194 0   SMG$K_FAO_STRING      = %X'FFFFFFF',
R0195 0   SMG$K_ARITH_STRING    = %X'FFFFFFFE',
R0196 0   SMG$K_OPERAND         = %X'FFFFFFFD',
R0197 0   SMG$K_SUBSTITUTE      = %X'FFFFFFFC',
R0198 0   SMG$K_ADD              = %X'FFFFFFFB',
R0199 0   SMG$K_SUBTRACT        = %X'FFFFFFFA',
R0200 0   SMG$K_MULTIPLY        = %X'FFFFFFF9',
R0201 0   SMG$K_DIVIDE          = %X'FFFFFFF8',
R0202 0   SMG$K_STORE            = %X'FFFFFFF7';

```

SMGTPALIB - SMGS TPARSE require files

G 16

15-Sep-1984 23:28:41

15-Sep-1984 22:51:35

VAX-11 Bliss-32 V4.0-742

[SMGRTL.SRC]SMGTPALIB.REQ;1

Page 5
(1)

: 0203 0

REQUIRE 'RTLIN:SMGTPACTL';

! TPARSE parameter block defs

R0205 0 | SMGTPACTL.REQ - SMG TPARSE Control Block Defs
R0206 0 | Version 1-002 - Edit: PLL1001
R0207 0
R0208 0
R0209 0 *****
R0210 0 *
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R0228 0 *
R0229 0 *
R0230 0 *****
R0231 0 |
R0232 0 |
R0233 0 ! AUTHOR: P. Levesque
R0234 0
R0235 0 | EDIT HISTORY:
R0236 0 | 1-001 - Original. PLL 28-Nov-1983
R0237 0
R0238 0
R0239 0 LITERAL
R0240 0 SMG\$K_PARAM_BLOCK_SIZE = TPASK_LENGTH0 + 60; ! TPARSE parameter block length
R0241 0
R0242 0
R0243 0 +
R0244 0 | Two parameter blocks are actually allocated together and are adjacent.
R0245 0 | The first is the TPARSE parameter block, and the second is a private
R0246 0 | parameter block needed to pass info between the routines in SMGBLDTRM.B32.
R0247 0 | The TPARSE action routines in SMGTPATAB.B32 also need these variables.
R0248 0
R0249 0 | TPARSE symbols (TPAS\$ xxx) are defined in RTLTPAMAC.REQ. Only private
R0250 0 | symbols are defined here.
R0251 0 | -
R0252 0
R0253 0 MACRO
R0254 0 | PARAM_A_TXT_FAB = TPASK_LENGTH0 + 0, 0, 32, 0%,
R0255 0 | ! addr of FAB for TERMTABLE.TXT
R0256 0 | PARAM_A_TXT_RAB = TPASK_LENGTH0 + 4, 0, 32, 0%,
R0257 0 | ! addr of RAB for TERMTABLE.TXT
R0258 0 | PARAM_A_BINARY_FAB = TPASK_LENGTH0 + 8, 0, 32, 0%,
R0259 0 | ! addr of FAB for TERMTABLE.EXE
R0260 0 | PARAM_A_BINARY_RAB = TPASK_LENGTH0 +12, 0, 32, 0%,
R0261 0 | ! addr of RAB for TERMTABLE.EXE

R0262 0 PARAM_A_CAP_PTRS = TPASK_LENGTH0 +16, 0, 32, 0%,
R0263 0 | addr of buffer for cap offsets
R0264 0 PARAM_A_CAP_DATA = TPASK_LENGTH0 +20, 0, 32, 0%,
R0265 0 | addr of buffer for data
R0266 0 PARAM_A_HEADER = TPASK_LENGTH0 +24, 0, 32, 0%,
R0267 0 | addr of buffer with header info
R0268 0 PARAM_L_TERM_INDEX_SIZE = TPASK_LENGTH0 +28, 0, 32, 0%,
R0269 0 | # bytes in term index
R0270 0 PARAM_A_TERM_INDEX = TPASK_LENGTH0 +32, 0, 32, 0%,
R0271 0 | address of temp. storage
R0272 0 | for terminal index
R0273 0 PARAM_L_CUR_TERM_DEF = TPASK_LENGTH0 +36, 0, 32, 0%,
R0274 0 | points to current term def
R0275 0 PARAM_L_CUR_DATA_BYTE = TPASK_LENGTH0 +40, 0, 32, 0%,
R0276 0 | next available data byte
R0277 0 PARAM_L_CUR_CAP_NUMBER = TPASK_LENGTH0 +44, 0, 32, 0%,
R0278 0 | number of capability currently
R0279 0 | being parsed
R0280 0 PARAM_L_SAVED_TOKENCNT = TPASK_LENGTH0 +48, 0, 32, 0%,
R0281 0 | remember how many chars in
R0282 0 | current cap string
R0283 0 PARAM_L_SAVED_TOKENSTR = TPASK_LENGTH0 +52, 0, 32, 0%,
R0284 0 | pointer to start of current
R0285 0 | cap string
R0286 0 PARAM_L_ORIG_TXT = TPASK_LENGTH0 +56, 0, 32, 0%;
R0287 0 | address of buffer containing
R0288 0 | text string (pre-upcase)
R0289 0 ! End of SMGTPACTL.REQ

SMGTPALIB - SMGS TPARSE require files

J 16

15-Sep-1984 23:28:41
15-Sep-1984 22:51:35

VAX-11 Bliss-32 V4.0-742
[SMGRTL.SRC]SMGTPALIB.REQ;1

Page 8
(1)

: 0290 0

REQUIRE 'RTLIN:SMGTRMMAC';

! TPARSE macros

```
R0292 0 %TITLE 'SMGTRMMAC.REQ - Macros for TERMTABLE'
R0293 0   Module: SMGTRMMAC.REQ   Edit: PLL1001
R0294 0
R0295 0
R0296 0
R0297 0   * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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R0314 0
R0315 0
R0316 0
R0317 0
R0318 0
R0319 0   ++
R0320 0   FACILITY: Screen Management
R0321 0
R0322 0
R0323 0
R0324 0   ABSTRACT:
R0325 0
R0326 0   This require file contains macros used in the creation of TERMTABLE.EXE.
R0327 0
R0328 0   MODIFIED BY:
R0329 0   1-001 - Original. PLL 30-JAN-1984
R0330 0   --
R0331 0
R0332 0   +
R0333 0   Macro $INCR_CAP_STRING_SIZE
R0334 0
R0335 0   Add the specified number of bytes to the capability string size.
R0336 0   We may be dealing with a negative size if extra processing is needed.
R0337 0
MR0338 0
MR0339 0   MACRO $INCR_CAP_STRING_SIZE (NUMBER_BYTES, STRING_SIZE) =
MR0340 0   BEGIN
MR0341 0   IF .STRING_SIZE LSS 0
MR0342 0   THEN
MR0343 0   STRING_SIZE = .STRING_SIZE - NUMBER_BYTES
MR0344 0   ELSE
MR0345 0   STRING_SIZE = .STRING_SIZE + NUMBER_BYTES;
MR0346 0
MR0347 0
R0348 0   !
R0348 0   ! Macro $INCR_CUR_DATA_BYTE
```

```
R0349 0
R0350 0
R0351 0
R0352 0
R0353 0
R0354 0
R0355 0
R0356 0
R0357 0
R0358 0
R0359 0
R0360 0
R0361 0
R0362 0
R0363 0
R0364 0
R0365 0
R0366 0
R0367 0
R0368 0
R0369 0
R0370 0
R0371 0
R0372 0
R0373 0
R0374 0
R0375 0
R0376 0
R0377 0
R0378 0
R0379 0
R0380 0
R0381 0
R0382 0
R0383 0
R0384 0
R0385 0
R0386 0
R0387 0
R0388 0
R0389 0
R0390 0
R0391 0
R0392 0
R0393 0
R0394 0
R0395 0
R0396 0
R0397 0
R0398 0
R0399 0
R0400 0
R0401 0
R0402 0
R0403 0
R0404 0
R0405 0

| Update the currently available data byte by the number of bytes
| just written. If this is the first byte of the string, then we
| also wrote a byte count.

|-
```

```
MACRO $INCR_CUR_DATA_BYTE (NUMBER_BYTES, FIRST_FLAG) =
BEGIN
    AP [PARAM_L_CUR_DATA_BYTE] = .AP [PARAM_L_CUR_DATA_BYTE] +
    NUMBER_BYTES +
    (IF FIRST_FLAG
        THEN 2          ! 1 for size, 1 for kind
        ELSE 0);

    SMG$$DATA_OFFSET = .SMG$$DATA_OFFSET + NUMBER_BYTES +
    (IF FIRST_FLAG
        THEN 2
        ELSE 0);

END; %:
```

```
+
| Macro to update the size of an arithmetic capability. This size
| will be negative.

MACRO $UPDATE_ARITH_STRING_SIZE (NUMBER_BYTES) =
BEGIN
    BIND
        CAP_PTRS = .AP [PARAM_L_CUR_TERM_DEF] : VECTOR [,WORD];
    LOCAL
        CAP_SIZE : REF VECTOR [,BYTE,SIGNED];
    CAP_SIZE = .AP [PARAM_L_CUR_TERM_DEF] +
    .CAP_PTRS [.AP [PARAM_L_CUR_CAP_NUMBER]];
    CAP_SIZE [0] = .CAP_SIZE [0] - NUMBER_BYTES;
END; %:
```

```
+
| We fill buffers with data and then do a block I/O write when we reach
| the end of a definition or when the buffer is full. Here we check to
| see if the buffer is full (ie. if there is room for the number of bytes
| we are about to put in it).
|-
```

```
MACRO $CHECK_BUFFER_OVERFLOW (BYTES_TO_WRITE) =
BEGIN
    LOCAL
        REMAINING_BYTES;
    REMAINING_BYTES = SMG$K_CAP_DATA_SIZE -
        (.AP [PARAM_L_CUR_DATA_BYTE] - .AP [PARAM_A_CAP_DATA]);
    IF BYTES_TO_WRITE GTR .REMAINING_BYTES
    THEN
        CALLG (.AP, SMG$$WRITE_DATA);
END; %;
```

SMGTRMMAC.REQ - Macros for TERMTABLE

M 16

15-Sep-1984 23:28:41
15-Sep-1984 22:51:46

VAX-11 Bliss-32 V4.0-742
[SMGRTL.SRC]SMGTRMMAC.REQ;1

Page 11
(1)

: R0406 0
: R0407 0 ! End of file SMGTRMMAC.REQ

0408 0
0409 0 ! End of file SMGTPALIB.REQ

Library Statistics

File	-----	Symbols	-----	Pages	Processing
	Total	Loaded	Percent	Mapped	Time
\$_\$255\$DUA28:[SYSLIB]STARLET.L32;1	9776	1	0	581	00:01.0

COMMAND QUALIFIERS

BLISS/LIBRARY=LIB\$:SMGTPALIB/LIST=LISS\$:SMGTPALIB/SOURCE=REQUIRE SRC\$:SMGTPALIB

Run Time: 00:04.0
Elapsed Time: 00:05.7
Lines/CPU Min: 6135
Lexemes/CPU-Min: 9780
Memory Used: 32 pages
Library Precompilation Complete

0361 AH-BT13A-SE
VAX/VMS V4.0

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SMGTPALIB
LIS

SMGSTATAB
LIS

SMGSTRTAB
LIS

0362 AH-BT13A-SE
VAX/VMS V4.0

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SORTSHR MAP

SORL
REQ

SORT32

DKS
REQ

SORTMERGE MAP